GEOGRAPHIC NEWS BULLETIN

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General Headquarters, Washington, D. C.

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LEAVES USED FOR MAKING ICE IN MEXICO
(See Bulletin No. 2)

HOW TO OBTAIN THE BULLETIN

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The MacMillan Arctic Expedition Under the Auspices of the National Geographic Society

SCIENTIFIC information of high value will accrue from the exploration of the world's biggest unknown area by the MacMillan Arctic Expedition under the auspices of the National Geographic Society with the active cooperation of the Navy.

Data which will be collected by members of the expedition and observations made by the United States Navy flyers are of potential value to navigators, farmers and fishermen.

The major geographical fact is that the huge unexplored area, a million square miles, lies between two American flags, that which flies over Alaska and that which Peary planted at the North Pole. In this area, more than three times the size of Texas, there is the possibility of a new continent being discovered, and the probability of land of some kind.

Why Land Is Expected

Belief in the existence of this land is based on reports of explorers who have skirted the edges of the unknown area, and of observations of tides and ice conditions along this fringe.

Should such land exist it will be of great future economic importance in view of the commercial flying that, in years to come, will be done across the Arctic regions.

The combination of aircraft and radio in Arctic exploration is a new feature of exploration, which not only adds romance and adventure to the undertaking, but which enhances the scientific value of the expedition.

Hitherto our information about the Far North has been from explorers who had to penetrate it in winter, when the ice was continuous; summer flying makes possible observations of entirely different conditions, with 24 hours of daylight to aid the flyers.

Will Try Arctic Radio Experiment

This same daylight, however, as radio fans will realize, is a handicap to broadcasting, because night time is radio time. The use of the new short wave length apparatus, under these conditions, is an experiment which will be of value to the new science of wireless communication.

Upper air temperatures in the Far North are almost as little known as the million square miles which may shroud a long-hidden continent. Summer records of these conditions not only will have a value to future flying but may have a direct bearing on weather forecasting.

Forecasting weather consists largely in detecting new disturbances as they show up on the western and northwestern borders of the United States, learning their characteristics, and figuring out the paths they probably will follow because of prevailing barometric pressures and temperatures ahead of them.

Tracking Weather to Its Lair

The great majority of what the weather forecasters call the "lows"—that is the areas of subnormal barometric pressure—seem to originate over the warm sea south of the Aleutian Islands in the winter, and over the interior of Alaska during the summer. But some of the conditions which cause these "lows" to be "built up" in those places and create "highs" to the east have their birth

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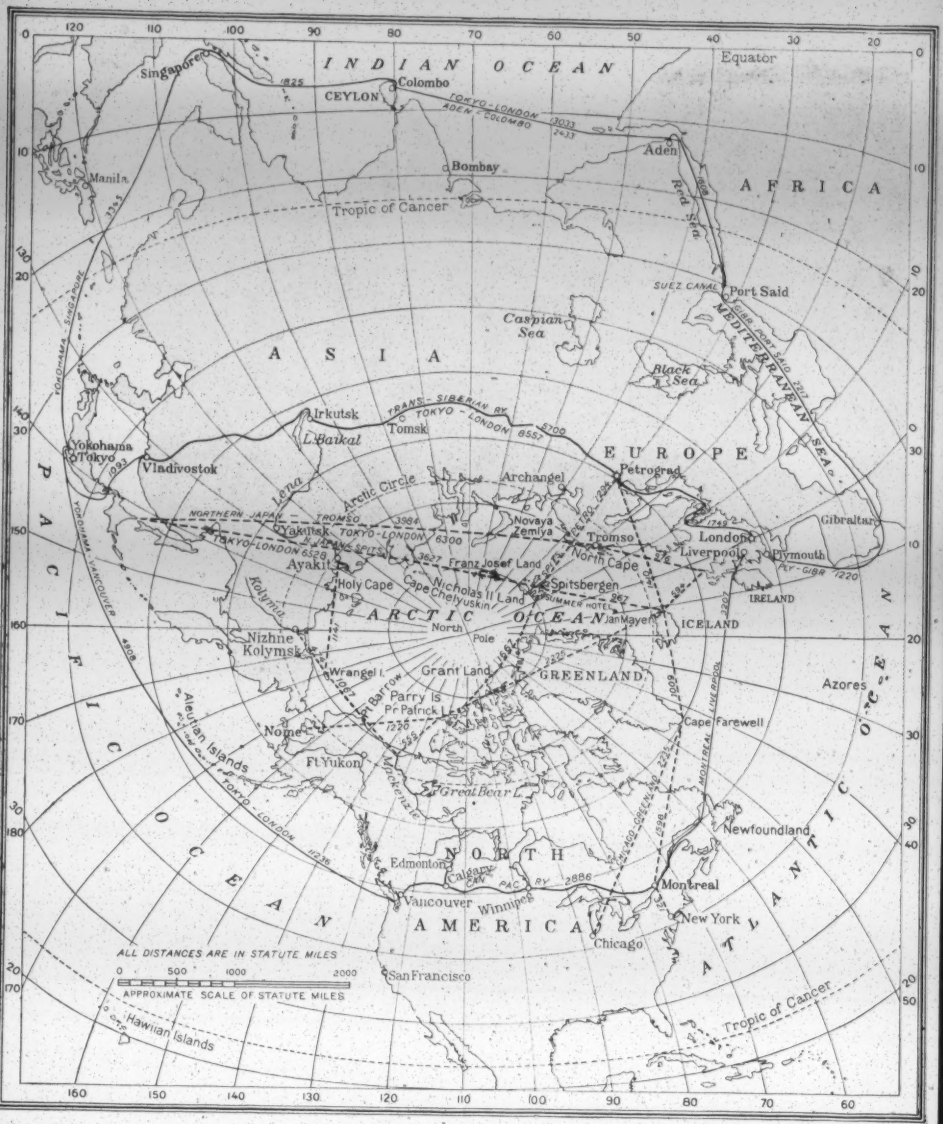

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A SKETCH MAP OF THE NORTHERN HEMISPHERE SHOWING PROPOSED ROUTES OF AIRCRAFT OVER THE ARCTIC ZONE

For many centuries explorers, sailing in the interest of commerce, sought Northwest and Northeast passages to the Far East. After many failures which proved costly in lives and ships, both Arctic routes were discovered, but the perils of the tortuous passages through icy seas far outweighed any advantage of shorter distance. Now, new northern passages are contemplated—passages through the air from northern North America to northern Europe and Asia; the Old and New Worlds are only a few "hops" apart, as the airplane flies. The northern continents, separated by the Arctic, seem, in the vision of the airman, not much farther apart than are Africa and Europe, separated by the Mediterranean, or North and South America, separated by the Caribbean (see Bulletin No. 1).

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Durango City Makes Ice With Leaves

DURANGO CITY, Mexico, and its vicinity were recently shaken by a severe earthquake. Durango City is capital of the state of the same name. Although it hovers on the borderline of the Torrid Zone, Durango City provides itself with one of the most peculiarly manufactured ice supplies in the world.

When the maguey, or century plant, has had the seven years of growth necessary to blooming and its bud has been tapped for pulque, in most places it is destroyed. At Durango, however, all the plants are assembled in one place, usually in the gardens in the eastern part of the city, where the leaves are laid out with their cupping surfaces upward on the ground, which has been covered with straw for the sake of cleanliness.

Water Freezes in Maguey Leaves

Into each leaf is poured about two quarts of water. Although the temperature is not low enough to freeze water in the canals or when it is placed in some domestic utensil, it does freeze in the maguey leaves. The ice is gathered in the early morning and put into the ice houses, which are built of adobe and are about twenty feet square, and twenty feet deep. The ice is thrown in through an opening in the roof and the slivers melt together and form a solid mass. Later on it is cut out and sold to the cheaper trade in competition with that from the city's ice factory as long as it lasts, which is usually until about the middle of July or the first of August.

No explanation has been offered as to why this peculiar method is used, but scientists are surmising that it is because the leaves, being shallow, give a broader surface exposed to the excessive evaporation and consequent cooling which naturally occur in such high altitudes, for Durango lies more than 6,000 feet above sea-level.

Tin Bulges From Flagstones

Some of the streets of this city, often called the "town of sunshine" because of its wonderful climate, are paved with flagstones measuring about 18 by 30 inches in size, which contain large quantities of almost pure tin in kidney ore, some of the single stones having as much as three or four pounds of tin in them. Where the softer stone has worn away, the metal protrudes in a manner painful to the feet as one gets the sensation of walking over marbles scattered on the pavement.

The region around this state capital of 30,000 inhabitants is said to be a veritable hunter's and fisherman's paradise, with its duck and large game shooting and the abundant fish life in its streams, but the fly in this blissful ointment is a poison scorpion whose bite causes from 30 to 40 deaths each year.

The Spanish Conquistadores found the site pleasing. Alonso Pacheco in 1563 laid the foundations for the present-day city under the direction of Governor Francisco de Ibarra, who named it for a city of his native province in Spain.

The history and development of Durango are irrevocably linked with the Cerro del Mercado, a hill of high grade ore estimated to contain 460,000,000

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farther north in the Polar Regions, and a better knowledge of temperatures, pressures and wind changes there undoubtedly would facilitate weather forecasting.

In the search for the beginnings of its weather the United States is not concerned with the entire Polar Regions. It is most concerned, it happens, with the unexplored territory which lies north of Alaska.

Temperatures, pressures and wind conditions—the vital weather factors—are not known in the regions north from Alaska to the pole. Exploration of this area is a preliminary to making detailed observations of these conditions which directly affect farms and orchards of the United States.

Navy's Part in Exploration

Speaking of the Navy's part in the expedition, Dr. Gilbert Grosvenor, President of the National Geographic Society, recently said:

"Two of the outstanding men of their generations in the history of Polar Explorations were officers of the U. S. Navy—Charles Wilkes, who discovered the Antarctic Continent on January 19, 1840, and Robert E. Peary, who attained the North Pole on April 6, 1909. Both were acting under the orders of the President and Secretary of the Navy.

"It is a matter of pride to the members of the National Geographic Society that the monuments to Peary and Wilkes in the Arlington National Cemetery were placed there by their Society.

"With these two names may be grouped other navy men whose enterprise and daring have added to our knowledge of the world. Among them are Charles Francis Hall, who pushed north from Thank God Harbor to within less than 8 degrees of the North Pole in October, 1871; George W. De Long, who lost his life in Polar work; William Francis Lynch, who in 1848 conducted a valuable official survey of the Jordan River and the Dead Sea; Matthew Calbraith Perry, who so diplomatically opened Japan to the outside world in 1853, and Thomas Oliver Selfridge, who conducted surveys for a canal across the Isthmus of Panama in 1869–73."

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A CARIBBEAN CONTRIBUTION TO THE STREETS AND HIGHWAYS OF THE UNITED STATES

The remarkable Pitch Lake of Trinidad furnishes a million dollars in revenue for its people each year. Columbus noted "that abundance of stone pitch that all the ships of the world might be therewith laden from thence." He found it excellent in trimming his vessels (see Bulletin No. 3).

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Asphalt and Its Trinidad Home

TRINIDAD, largest British island in the West Indies, which has recently erected a memorial to Oliver Hazard Perry, is better known in the United States as the birthplace of good roads than the place where a famous American naval officer died.

The most southerly island of the West Indies and the largest of the British Islands in the Caribbean with the exception of Jamaica, lying just a few hundred feet from the Venezuela coast, Trinidad ships yearly to the United States more asphalt and bitumen than all the other countries of the world combined. Our 80,000-ton importation from Trinidad, however, is only about one-fourth of the quantity used in the United States. Much of our road material is a by-product of the petroleum and coal tar industries.

Raleigh Was Enthused

When Sir Walter Raleigh stopped on the shores of Trinidad to "pay" his vessels with pitch from the famous "lake," he declared that there was enough of the substance for all the vessels of the world for centuries to come, and even the demand which modern civilization has put upon the supply has scarcely changed the truth of his statement.

About a mile from the shore, near La Brea, the peculiar phenomenon, which has been variously termed an "inferno," a "Stygian pool," and "the fountain of Styx," is located. Had Dante known of its existence, it probably would have served to stimulate his imagination to still more fantastic flights. However, the lake about which so many interesting stories have been told does not deserve its reputation. A man who contemplated suicide in its black depths would die of starvation before the ooze dragged him in above his knees.

The sensation produced by walking over its surface is much like that of treading upon some great beast whose flesh gives beneath the feet—it is soft, blood-warm, and the wrinkles over its surface in the blinding light of the sun seem to rise and fall with its breathing and the water which gathers in the furrows suggests that the animal is perspiring.

The Furrow That Is Never Finished

It is said that the area of the pitch-bearing lake is 110 acres and no one knows how deep it is. There is an almost uncanny feature connected with the removal of the asphalt from the area. Rails and sleepers have been built out into the lake and each day the laborers dig up chunks of the pitch, which break off with dry, blue-flintlike fractures, and throw them into a car which runs on rails. Each day they make a trough along the sides of the track with their picks and when they return the next morning the trough is filled again level and solid for them to dig up—a furrow that is never finished.

Like the Burning Bush, the lake seems never to be consumed, and like the daughters of Danaus, who had to catch water in a sieve, the men never see the results of their labors. At night a great gully runs across the horizon, and at dawn the surface is level again.

About every three days, however, the pitch swallows up the rails and the

tons of metal, assaying from 70 to 75 per cent of pure iron, which was discovered in 1552.

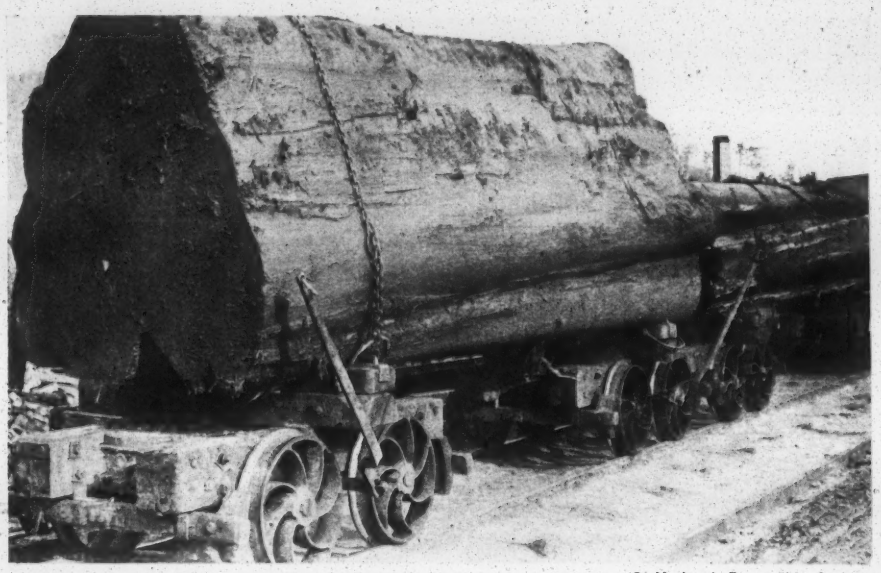
Hillsides Bursting With Metals

The hillsides of the state of Durango are fairly bursting with metals. They have been famed since colonial times for their output of silver and gold. The city of Durango formerly was the seat of a Mexican mint, built in 1811, which coined more than a million dollars worth of silver and gold each year. The silver and gold output to-day are valued at several million dollars. Mines in the state also yield quantities of copper, iron, cinnabar, zinc, and lead.

The Avino mine opens its rich vein of silver grey ore and pours it out in an open quarry which is still yielding the precious metal, though it has been mined for 350 years, since the time when the owner deeded it to those white inhabitants living near it, who would build their houses close enough together to protect them from the raids of the savage Indians. The cathedral which now stands in the city of Durango owes its very existence to the Avino mine. The taxes placed upon its output built the church. It has been told also that several of the mines in the vicinity permitted the miners to carry out a piece of rich silver ore, which they presented as an offering to the priest, who sold it for building materials.

Water Works of 1728 Still in Use

The engineers of old Durango built well, for the water works of the city, which were dedicated in 1728, are still intact and the canals built at the same time still traverse all the principal streets, from which the court yards of the houses obtain water for irrigation. Though a modern system of water works has been installed in later years, the old water works are still in use and alone serve the outlying districts.



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A EUCALYPTUS LOG FROM TASMANIA

A great many of these logs are sawed up into paving blocks and exported to the ends of the earth. The eucalyptus is the great timber tree of the lands of the far south. Tasmanian blue gum is one of the strongest, densest, and most durable woods in the world; its strength is twice that of English oak (see Bulletin No. 4).

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U. S. Fleet to Visit Australia's "Little Sister"

TASMANIA has been placed on the itinerary of the American fleet in its trip to Australia. Certain ships, at least, expect to drop anchor at Hobart, capital city of the island.

Known affectionately as "Little Tassy" and "Australia's Little Sister," Tasmania, an island just 150 miles south of that continent, is the Rhode Island of the Australian Commonwealth. But though it is the smallest of the provinces that make up Australia's Federation, it is of fair size, having more than twenty times the area of our own smallest state. Its 26,000 square miles give it a size slightly greater than West Virginia.

There was a tendency among the people of the mainland to consider Tasmania of small account when the political battles for the formation of the Australian Commonwealth were being fought out, and there was likelihood at times that the island would not be included. The Tasmanians, isolated somewhat beyond 150 mile Bass Strait dubbed the Australians "other siders." Tasmania was included, however, and promises to be of great importance to the country of which it is a part. Mainland Australia's farthest projection toward the pole carries it only into a latitude corresponding to Washington, D. C. Tasmania, reaching to a position comparable to that of Boston and Buffalo, adds a land of cool climate products needed to round out the predominantly tropical and semi-tropical mainland.

Apples Are Its Strong Point

The island is largely highland, but has a relatively broad belt of rich brown soil on the northern border closest to Australia. There potatoes and other vegetables flourish and are shipped across to populous Melbourne and Sydney. The most spectacular agricultural development, however, has been in apple growing. It was found that the region around Hobart, the capital, produces this fruit to perfection. Now great orchards cover the countryside, and more than 2,000,000 bushels of apples are shipped yearly to Australia, Great Britain, the European continent and even Africa.

One other important contribution which Tasmania makes, which is lacking somewhat on the mainland, is waterpower and potential waterpower. Winds from the Indian Ocean blow a tremendous amount of moisture to the highlands of western Tasmania; and the rivers of that region, though not long, carry a huge volume of water. Much of the precipitation is in the form of snow which blankets the mountains and melts slowly far into the summer. Already some waterpower has been developed and there are plans for more extensive development. Some of the power is operating woolen mills for the utilization of Tasmanian and Australian wool, and this industry is growing steadily.

Named for Tasman, Discoverer

Heavy forests grow in Tasmania, most of the trees being of Australian types. There are some, however, unlike those of Australia, which are exactly like trees growing in Tierra del Fuego, the southernmost tip of South America —a fact that has made geologists wonder. The animals are mostly like those in Australia, chiefly marsupials.

sleepers and they must be raised and readjusted on the surface. Although about 100,000 tons of asphalt are being taken from the lake each year, the little track need never be moved; the pitch comes to the railway.

"Excalibur" of an Asphalt Lake

The subtle movements of this queer pool have produced some "spooky" effects—islands wander like lonely ghosts from shore to shore; sometimes a tree trunk sticks up out of the surface like the arm clothed in white samite which, like "Excalibur," points its warning finger, and again is drawn back into the Cimmerian depths.

One writer has estimated that at least 10,000,000 tons of the mixture have been churned into asphalt by gas during the ages in Pitch Lake, which is known as Devil's Cauldron among the natives. About 4,000,000 tons have already been removed, and by 1920 the surface of the lake had fallen 15 feet below its former level. Once during its history the viscous fluid overflowed its banks and made its way to the sea near La Brea. Now the world's supply is shipped from Brighton, which fairly reeks of its stock in trade. Asphalt boulders stick up out of the sand along the shore like mysterious black sea worms, the piles of the piers are caked with pitch, the pavements are of the same material, and the black children of the island play with dolls whose little black faces and bodies are made of pitch.

Takes Name from Three Peaks

The island is really a beautiful resort, its roads are excellent, and it is easy to reach from the Venezuela shore, its green trees towering on the sky line from far out at sea. On his third voyage Columbus saw its three mountain peaks, which gave it its name, rise out of the sea on July 31, 1498. At the foot of these hills clusters the group of buildings which forms the capital city, Port of Spain, a rather nondescript modern town which has grown up on the charred ruins of the old Spanish city.

Though the island has been British since 1797, it is as polyglot as Zanzibar; negroes, mulattoes from high yellow to ginger, Frenchmen, Spaniards, Venezuelans, Chinamen, East Indians, Tamils, Americans, and Englishmen loiter in its streets or hang over its balconies.

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Ashanti On the Route of Wales' Tour

THE VISIT of the Prince of Wales to Sekondi and Accra, ports of the Gold Coast, and his reception by the black chieftains in all their finery, recall the recent return to this British colony of a monarch of its own—but he returned as a private citizen. Prempeh, the last king of the stalwart Ashantis, will never again occupy the Golden Stool.

A "no man's land" of death and terror once separated Ashanti from the coast but when the Prince of Wales arrived he found a modern railroad linking Sekondi with Kumasi, 158 miles away and once the Ashanti stronghold.

The capital of the People Who Eat Corn is the City Under the Oakum Trees; which is the translated way of saying that the capital of Ashanti is Kumasi. There are many potentates in Ashanti but, until Prempeh was deposed, the King of Kumasi was the paramount monarch of all the ebon Ashanti tribes. He it was who, in theory at least, maintained the traditional harem of 3,333 wives, drank from the skulls of his would-be conquerors, and immolated relatives of distinguished dead in the Spirit House in the Grove so that the departed might have an ample entourage in the next world.

Where Plants Struggle to Live

Ashanti lies north of the Gold Coast of Africa, between the Ivory Coast and Togoland. The country is approximately the size of West Virginia. About half of its area comprises one of the thickest, densest, most impenetrable primeval forests in all the world. The iron-tree and the bombax, the silk-cotton and the hardwood, bamboos and ferns, and an almost infinite variety of growths engage in a fierce fight for life. Every plant, from slender tendril to giant tree, rises erect, seeking a place in the sun; "drawn out to an absurdly disproportionate height in its endeavor to force its own head above those of its neighbors."

The mahogany, the teak and the ebony, varieties which civilization prizes, here crowd each other for life. Flowers, birds and beasts are excluded; the plant life sucks in every iota of sustenance from sun and soil. Parasites abound. Velvety moss clings to the decaying trees that have met defeat. There being no more room aloft the lianas, or monkey-ropes, festoon themselves from tree to tree and form weird arbors for lesser horizontal growths.

British March on Capital

The white man, even with all the aids of modern medicine, cannot survive long in such a habitat; only the most stalwart of the black men can adapt themselves to it. In the seventeenth century, or a little earlier, migrating Moslem tribes to the north drove bands of negroes into the country. The newcomers took possession of this forest realm, and, in defending it, developed themselves into a vigorous, clannish people.

Tradition has it that a famine drove large numbers of the settlers south and that these refugees kept alive on herbs, or "fan," in the native tongue; while those left behind ate corn, or "san." The former, who inhabit the Gold Coast to this day, are known as Fanti; while those who remained were called

When Tasmania was discovered in 1642 by a Dutch navigator, Tasman, it was named Van Diemen's Land, a name which stuck to it for several centuries. The British hurriedly established the first settlement on the island in 1803 for fear the French were about to colonize it.

The original inhabitants of Tasmania were black and woolly-haired, but differed from the Australian aborigines. They are said to have been the most primitive people of modern times, having the development of men of the Stone Age. Only about 2,000 strong in 1803, they rapidly disappeared. Their going constitutes one of the most tragic chapters in the history of the white settlement of new lands.

Blacks and Bush-rangers Disappear

Like Australia, Tasmania suffered in the early years of its settlement from the blight of convict transportation. Its first settlement was a penal colony, and for a number of years only convicts and their guards made up its population. Free settlers came in also but shipload after shipload of felons and robbers, horse-thieves and burglars were dumped among them until 1853 when the British Government was induced to abandon that method of disposing of its criminals.

Naturally Tasmania in the early days, with such human material, was an inferno. Many convicts escaped to the back country. They became "bush-rangers," unprincipled thugs who, operating in bands, attacked the settlers, robbed them, and killed their victims like wild beasts. Their brutal treatment of the natives aroused their enmity against the whites, and they, too, attacked the settlements. This led to retaliation in which the blacks were practically exterminated. The few survivors were placed on a reservation in 1832 but they did not thrive and the last full blooded native died in 1876. Only a few half-castes remain today. After the natives were gotten out of the way the bush-rangers were rounded up and executed.

Like a Part of England Now

Purged of its unruly elements by the elimination of the blacks and the bush-rangers, and by the exodus of many ex-convicts to the Australian gold fields, Tasmania settled down to a quiet life in which today one can find no traces of the hectic pioneering days. The inhabitants are almost entirely of British and Irish stock born in the island. This fact, together with the cool climate and the flourishing crops of Europe, make Tasmania more truly a miniature of Old England than any other British colony.

Bulletin No. 4, May 4, 1925.

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Ashanti. Both tribes speak the same language, but the Ashanti, in their isolation, have developed a physical superiority to their southern neighbors.

In 1807 the Ashantis came into first contact with the British by attempting to invade the realm of the Fantis. Not until a quarter of a century later were the northmen driven back from the seacoast. Early in the seventies difficulties arose which caused British forces to undertake the exceedingly arduous task of marching upon Kumasi. The expedition was successful and it was not until after the elevation of Prince Prempeh to the Golden Stool in 1888—the same Prempeh who now has returned to his former domain—that troubles arose again.

Prempeh was enthroned after a civil war and he had to consolidate his power; but, in 1893, he closed the roads of his dominion to traders from the south, so that the British Government had to intervene in behalf of their Gold Coast Protectorate. This intervention resulted in the surrender of Prempeh, three years later, and his exile, first at Elmina, a Gold Coast town, and later upon the Seychelles Islands. There he spent 28 years and had, for varying periods, the company of such picturesque exiles as Saad Zaghlul, of Egypt; the warlike Kabarega, of Unyoro, and Sayyid Khalid, of Zanzibar.

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PORTERS IN LIBERIA, GOLD COAST COLONY NEIGHBOR

Palm-leaf hampers are used for overland transport and though frail in appearance these hampers are extremely strong. An average load weighs from fifty-six to sixty-five pounds. During the World War much rice was brought down to Monrovia from one hundred miles inland by such porters (see Bulletin No. 5).